

## Release Notes LaGriT version of Spring 2001

A summary of the major changes found in this release are listed below. A complete list of changes is included at the end of this document. Refer to the user's manual for a complete description of the new, enhanced and revised commands.

### New Commands:

**reorder** **reorder/cmo/sort\_key** will reorder a the mesh object according to the sort\_key. See **sort**

**interpolate** **interpolate/map|continuous|voronoi/cmo\_sink/attr\_sink/ifirst,ilast,istride, /cmo\_source/attr\_source/[mintie|maxtie]/[value|plus1|nearest source\_attr/[keepatt|delatt]**

### Enhanced Commands:

**extrude** **extrude/cmoout/cmoin/interp/layers/range1/range2**

**smooth** **smooth/position/network/pset,get,name/number\_of\_iterations/weight/[check|nocheck]**

**createpts** **createpts/voronoi**

**cmo** **cmo/set-id/cmoname/both|node|element/[attributename1/attributename2]**

**sort** **sort/cmoname/bins /[ascending|decending]/[ikey]/in\_att**  
**sort/cmoname/index|rank/[ascending|decending]/[ikey]/in\_att1**  
**in\_att2 in\_att3**

**extract** **extract/surfmesh/ifirst,ilast,istride/cmo\_out/[cmo\_in]/[external]**  
extract only exterior surface.

**recon** **recon/[0,1]/[toldamage]/[checkaxy]** If checkaxy is specified., then for the case of 2-D triangular meshes, we check xy- projected areas are positive and larger than EPSILONA.

### Bugs:

06/06/00	dumpgmv_hybrid	use i3.3 format to write 'created' material names.
07/24/00	setsize_nosb	test against mbndry_old not mbndry for noop condition
07/25/00	set_global_nosb	set only integer or real (don't wipe out previously set variable)
07/27/00	lower_d_lg	set ioff before using, increase dimension of tmsgout, imsgout
08/16/00	connect	fixed memory problems with failure lists
09/08/00	boundary	fix several bugs relating to resetting icr values
09/08/00	rotatept	fix getting pset if using numeric arguments
09/08/00	rzbrick3	call cmo_get_name before calling cmo_get_info
09/27/00	multi_material_2d_lg	missing argument in surfstsv calls
10/12/00	pset	restore 'eq' as default operation
10/20/00	refine_face_add	fix problems with second pass on 2d refine
03/23/01	surface	fix problem with cone type - parameters saved in wrong place
05/07/01	cer_chain	make refine on roughness work for 2d meshes

### Code Improvements:

06/08/00	cmo_mesh_type	new mesh type triplane like tri but ndimensions_geom=2.
08/25/00	addmesh_pyramid	use kd tree to find matching grid boundaries
09/03/00	pset, eset	changed formats so big indices will print

03/26/01 cmo\_interpolate implement user option - user must supply user\_interpolation subroutine  
03/20/01 mega\_error, mega\_hessian fix allocation of over large tmp array

Code Changes:

06/08/00 cmo\_get\_info return itype=4 for pointer retrieval  
06/08/00 control\_command\_lg echo comments to outx3dgen  
08/23/00 mm2000 print block in address order  
09/24/00 rmpoint fix allocations for temp space to use a better estimate of size and integer type if possible.  
09/25/00 refine\_face\_add skip call to settets if attribute skipsettets is /=0  
10/03/00 rzbrick3 pset eset remove references to ialias  
filter, hextotet\_hybrid, refine, readngptet readngphex dump\_fehm extract\_interface  
10/12/00 mmrelblk comment out warning if block does not exist  
10/20/00 cel\_chain force exclusive for rivara\_truncated refines  
10/31/00 connect,delaunay change epsilons for point insertion tests  
05/14/01 statementfunctions.h new function DSZIRTRI calculates the SIGNED inscribed radius of tri.  
05/15/01 refine\_face\_add use cmo\_interpolate values for coordinates of new points  
05/15/01 recon all recon commands processed through subroutine recon  
toldamage now computed if not supplied  
05/29/01 refine We now pass PSETNAME=-def- in the case of 2-D with no surface.  
In this case the entire 2-D grid will be in the 'pset' for refinement.  
05/29/01 cer\_chain We commented out the RECON after refinement.  
05/29/01 agd3d We now refrain from merging out nodes if they would create  
a roughness > 0.8\*TOLROUGHNESS.  
05/29/01 getgsynth Initial revision. Computes synthetic normals for ALL nodes in 2-D  
05/29/01 massage We now take TOLROUGHNESS in the argument list. This is  
a format change, but old decks should still work.